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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,905	05/04/2001	Fausto Meli	PI00-065	8705

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EXAMINER

BELLO, AGUSTIN

ART UNIT PAPER NUMBER

2633

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,905

Applicant(s)

MELI, FAUSTO

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/1/01</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3 and 8, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 3 and 8 recite the limitation "said filtering station." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, 6, 8, 9, 11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohya (U.S. Patent No. 5,598,491).

Regarding claim 1, 6, 11, and 14, Ohya teaches a station (reference numeral 23-26 in Figure 13) for transmitting optical signals, comprising a transmission signals generator (reference numerals 23-26 in Figure 13), capable of generating at least two signals at wavelengths lying within a band of predetermined width, and a multiplexer (reference numeral 27 in Figure 13) of the said optical signals; a station (reference numeral 22 in Figure 13) for receiving the said optical signals; an optical fibre line (as seen in Figure 13) connecting the said

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multiplexer of the transmission station to the said receiving station; the said optical fibre line including at least one optical amplifier (reference numeral 19 in Figure 13) comprising at least one fibre doped with a rare earth (reference numeral 1 in Figure 13), at least one source of pumping radiation (reference numeral 2, 3 in Figure 13) for the said doped fibre, and a gain stabilization circuit (reference numerals 6-10 in Figure 13), characterized in that the said gain stabilization circuit includes: a separator (reference numeral 6 in Figure 13) of the transmission signals from the spontaneous emission of the amplifier, connected after the said doped fibre and capable of sending the said transmission signals to one output of the amplifier and the said spontaneous emission to a further output, a loop circuit (reference numeral 8-10 in Figure 13) for the re-circulation of the said spontaneous emission collected from the said further output and re-injected (reference numeral 7 in Figure 13) before the said doped fibre of the amplifier.

Regarding claims 3 and 8, Ohya teaches that the said loop circuit comprises a length of optical fibre (as seen in Figures 1 and 13) having one end connected to the output of the said filtering station and the other end connected, through a coupler (reference numeral 7 in Figure 13), before the doped fibre of the amplifier.

Regarding claims 4 and 9, Ohya teaches that said loop circuit comprises a variable attenuator (reference numeral 10 in Figure 13) connected along the length of fibre.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 5, 7, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohya in view of Huber (U.S. Patent No. 5,283,686).

Regarding claim 2, 5, 7, 10, and 12, Ohya differs from the claimed invention in that Ohya fails to specifically teach that the said signal separator comprises an optical circulator, connected after the doped fibre of the amplifier by a connecting fibre and to the output port of the amplifier by a connecting fibre opposite to the previous one, and having an intermediate connecting fibre connected to a selective reflection filtering station which reflects along the said fibre the signals having wavelengths equal to those of the transmission signals and sends the remaining radiation to the said loop circuit. However, the use of optical circulators and gratings to separate ASE light from amplified signal light is well known in the art. Huber, in the same field of optical communication, teaches that this concept is well known in the art (Figures 1 and 4).

Furthermore, Ohya suggests the use of gratings to separate ASE light from amplified signal light (Figure 11). One skilled in the art would have been motivated to employ a circulator and grating configuration such as that taught by Huber in order to allow a very narrow band of signals to be reflected from the gain stabilization circuit of Ohya (column 1 lines 38-54 of Huber) and to take advantage of the superior coupling efficiency provided by optical circulators. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ an optical circulator and Bragg grating configuration in the system of Ohya.

Regarding claim 13, Ohya teaches collecting the portion of non-reflected radiation corresponding to the spontaneous emission of the amplifier (reference numeral 8 in Figure 13);

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attenuating this portion of radiation (reference numeral 10 in Figure 13), and coupling this attenuated portion of radiation to the input of the amplifier (reference numeral 7 in Figure 13).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB


AGUSTIN BELLO
PATENT EXAMINER